Claims

[c1] A method for facilitating damping torsional vibrations of a dynamoelectric machine including a rotor assembly with a first amortisseur bar and a second amortisseur bar extending therefrom and terminating at an endring, said method comprising:
providing a damping assembly;
positioning the damping assembly between the first amortisseur bar and the second amortisseur bar such that the damping assembly contacts the first and second amortisseur bars and is substantially proximate the endring.

[c2] A method in accordance with Claim 1 wherein said providing a damping assembly comprises providing a damping assembly including a first member and a second member, the first member and second member comprise a resilient material.

[c3] A method in accordance with Claim 2 wherein said providing a damping assembly comprises providing a damping assembly including a third member comprising a rigid material.

[c4] A method in accordance with Claim 1 wherein said providing a damping assembly comprises bonding a first resilient member and a resilient second member to a third support member such that the third support member is between the first resilient member and second resilient member.

[c5] A method in accordance with Claim 1 wherein said positioning the damping assembly comprises positioning the damping assembly to an endplate of the dynamoelectric machine by at least one of a weld, a fastener, and a locking plate.

[c6] A method in accordance with Claim 1 wherein said positioning the damping assembly comprises positioning the damping assembly to an endplate of the dynamoelectric machine by welding a support member to the endplate and bonding the first and second resilient members afterwards.

[c7] A method in accordance with Claim 1 also comprising:

providing a second damping assembly; and

connecting the second damping assembly to the first damping assembly such that the second damping assembly is positioned between the second amortisseur bar, a third amortisseur bar, and substantially proximate to the endring.

[c8] A method in accordance with Claim 2 wherein said providing a damping assembly comprises providing a damping assembly including a first member comprising a rectangular cross-section, and a second member comprising a rectangular cross-section, the first and second members comprise a resilient material.

[c9] A method in accordance with Claim 2 wherein said providing a damping assembly comprises providing a damping assembly including a first member and a second member, the first member and second member comprise vulcanized natural rubber.

[c10] A method in accordance with Claim 2 wherein said providing a damping assembly comprises providing a damping assembly including a third member comprising a substantially cubicle shape and fabricated from a rigid material.

[c11] A method in accordance with Claim 2 wherein said providing a damping assembly comprises providing a damping assembly including a third member comprising stainless steel.

[c12] An amortisseur bar damping device comprising:

a rigid support member including a first side and a second side opposite said first side; and

a first resilient member disposed to said first side and a second resilient member disposed to said second side.

[c13] An amortisseur bar damping device in accordance with Claim 12 wherein said first and second resilient members comprise a substantially rectangular shape.

[c14] An amortisseur bar damping device in accordance with Claim 12 wherein said first and second resilient members comprise an elastomer.

[c15] An amortisseur bar damping device in accordance with Claim 12 wherein said support member comprises a substantially cubicle shape.

[c16] An amortisseur bar damping device in accordance with Claim 12 wherein said support member comprises stainless steel.

[c17] A damping assembly comprising:
a rotor core;
a first amortisseur bar extending from said rotor core;
a second amortisseur bar extending from said rotor core, said second amortisseur bar substantially parallel said first amortisseur bar; and
a damping device contacting said first and second amortisseur bars distal from said rotor core and substantially proximate an endring, said damping device comprising:
a rigid support member including a first side and a second side, said first side opposite; and
a first resilient member disposed to the first side and a second resilient member dispose to the second side.

[c18] A motor comprising:
a housing;
a stator comprising a bore therethrough, said stator mounted in said housing;
a rotor shaft extending at least partially through said bore; and
a rotor assembly mounted on said rotor shaft, said rotor assembly comprising:
a rotor core mounted on said rotor shaft;
a plurality of amortisseur bars extending axially through and projecting from at least one end of said rotor core;
a plurality of endrings connected to each end of said amortisseur bars distal from said core;

an endplate attached to said core; and

an amortisseur bar damping device mounted between at least two of said amortisseur bars, said amortisseur bar damping device distal said core and substantially proximate said endring.

[c19] A motor in accordance with Claim 18 wherein said amortisseur bar damping device is secured to an endplate of a machine such that the damping assembly is positioned between and radially adjacent to a first amortisseur bar and a second amortisseur bar and distally from the rotor assembly.

[c20] A motor in accordance with Claim 18 wherein said amortisseur bar damping device is secured to an endplate of a machine by at least one of a fastener, a weld and a locking plate.

[c21] An amortisseur bar damping device comprising:

a rigid support member including a first side and a second side opposite said first side;

a channel disposed longitudinally along said first side; and

a resilient member disposed to said U shaped channel.

[c22] An amortisseur bar damping device in accordance with Claim 21 wherein said support member comprises a substantially rectangular shape.

[c23] An amortisseur bar damping device in accordance with Claim 21 wherein said support member comprises stainless steel.

[c24] An amortisseur bar damping device in accordance with Claim 21 wherein said channel comprises a substantially U shape.

[c25] An amortisseur bar damping device in accordance with Claim 21 wherein said resilient member comprises a substantially rectangular shape.

[c26] An amortisseur bar damping device in accordance with Claim 21 wherein said resilient member comprises an elastomer.